

### CLAIMS

1. A dual fluid cartridge assembly comprising:
  - (a) an outer cartridge for carrying a first fluid, said outer cartridge formed with a cartridge outlet;
  - (b) an upper seal for sealing said first fluid in said outer cartridge;
  - (c) an inner cartridge for carrying a second fluid;
  - (d) a piston tube for providing a fluid flow path from said inner cartridge to said cartridge outlet; and
  - (e) a lower seal for sealing said second fluid in said inner cartridge, wherein said cartridge assembly is configured with an air vent path from said inner cartridge to atmosphere when said lower seal is in an empty position and further configured to close said vent path when said lower seal is displaced away from said empty position.
2. The dual fluid cartridge assembly as recited in claim 1, wherein said inner cartridge is formed as a cylindrical member open at one end defining a base plate and a cylindrical sidewall.
3. The dual fluid cartridge assembly as recited in claim 2, wherein said base portion is formed with one or more base slots.
4. The dual fluid cartridge assembly as recited in claim 3, wherein said one or more base slots are radial slots.
5. The dual fluid cartridge assembly as recited in claim 4, wherein said one or more base slots are in fluid communication with one or more axial slots formed in said cylindrical sidewall of said inner cartridge.

6. The dual fluid cartridge assembly as recited in claim 5, wherein said inner cartridge is formed with one or more notches at said open end to enable air from said axial slots to bleed out of said inner cartridge.

7. The dual fluid cartridge assembly as recited in claim 8, wherein said outer cartridge is formed with one or more axial slots to enable air from said inner cartridge to vent out of said outer cartridge.

8. The dual fluid cartridge assembly as recited in claim 1, wherein said cartridge assembly is configured with a vent to enable trapped air from said outer cartridge to be vented to atmosphere.

9. The dual fluid cartridge assembly as recited in claim 8, wherein said outer cartridge is formed with a base plate and a cylindrical sidewall, said sidewall being provided with one or more slots in said cylindrical sidewall.

10. The dual fluid cartridge assembly as recited in claim 9, wherein said slots are axial slots, formed adjacent said base plate.